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EXAMINER

KIM, HEE-YONG

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/587,752	Applicant(s) DEI ET AL.	
	Examiner HEE-YONG KIM	Art Unit 2482	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2011.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 154-156, 158, 162-187 and 189 is/are pending in the application.
- 4a) Of the above claim(s) 143-153, 157, 159-161 and 188 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 154-156, 158, 162-187 and 189 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/28/2006, 11/19/2008, 7/15/2009, 11/23/2009</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of **claims 154-156, 158, 162-187 and 189** in the reply filed on March 9, 2011 is acknowledged.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 175 and 180** are rejected under 35 U.S.C. 102(b) as being anticipated by Hatabu (WO 03/092,295), hereafter referenced as Hatabu.

Please notice that in this office action, English version (US 2005/0,111,541) corresponding of Hatabu (WO 03/092,295), which was published in Japanese, is used instead because applicant's IDS on 7/15/2009 indicates their equivalence.

Regarding **claim 175**, Hatabu discloses Moving Image Transferring System, Moving Image Encoding Apparatus, Moving Image Encoding Apparatus, and Moving Image Transferring Program. Hatabu specifically discloses A content receiving apparatus (Moving Picture Decoding Apparatus 200, Fig.1) comprising: means (encoded data receivers 201-1 to 201-N, Fig.1) for receiving encoded data from at least one session (Fig.7: Examiner interprets a session as a communication based on a packet and different transmission line), and identifying individual ones of the encoded

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data therefrom (i-th packet, n-th frame, Fig.7); and

means for extracting the encoded data received with no transmission error and no dropout from among the received encoded data and reconstructing the encoded data (Fig.5).

Regarding **claim 180**, Hatabu discloses everything claimed as applied above (see claim 175). Hatabu further discloses means for selecting whether to receive the data by at least one of the encoded data receiving means based on at least one of: error/loss rate of received data; available power; and setting set in advance (N Encoded data receiver, 201-1 to 201-N, Fig,1).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 154-155, 158, 163-166, 182, 186-187 and 189** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hatabu.

Regarding **claim 154**, Specifically Hatabu discloses A content distribution apparatus (Fig.1) comprising: first through Nth encoded data transmission means (Multiplexing means, par. 20; Fig.1) for receiving the read encoded data and outputting (multiplexing the plurality of encoded data; Fig.2) first through Nth encoded data (wherein N is an integer equal to or greater than two); at least a part of the first through

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Nth encoded data obtained by said first through Nth encoded data transmission means being transmitted (transmission path 300, Fig.1). However Hatabu fails to disclose means for reading at least one item of encoded data from a content file.

However, it was obvious to one of ordinary skill in the art at the time invention to store the encoded output from multiple encoders of Hatabu into files and to be read by multiplexer later for multiplexing, in order to transmit the video on the schedule or video on demand.

Therefore, given this teaching, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Hatabu by providing specifically storing the encoded output from multiple encoders of Hatabu into files which will be read by multiplexer later for multiplexing, in order to transmit the video on the schedule or video on demand. The Hatabu moving image transferring system, incorporating storing the encoded output from multiple encoders of Hatabu into files which will be read by multiplexer later for multiplexing, has all the features of claim 154.

Regarding **claim 155**, the Hatabu moving image transferring system, incorporating storing the encoded output from multiple encoders of Hatabu into files which will be read by multiplexer later for multiplexing, as applied to claim 154, discloses A content distribution apparatus comprising:
means for reading at least one item of encoded data (encoded packet generator 115-1, 115-2, Fig.2) and at least one item of error correction code data (packer error detecting code 116-1, 116-2, Fig.2) from a content file;
first through Nth encoded data transmission means (output first encoded packet data

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and output second encoded packet data, Fig.2; either of them has both encoded data and error correction code) for receiving the read encoded data and outputting first through Nth encoded data (wherein N is an integer equal to or greater than one); and at least one error correction code data transmission means (output first encoded packet data and output second encoded packet data, Fig.2; either of them has both encoded data and error correction code) for receiving the read error correction code data and outputting the error correction code data;

at least one of (a) at least a part of the first through Nth encoded data and (b) at least a part of the error correction code data~ being transmitted (Fig.2).

Regarding **claim 158**, the Hatabu moving image transferring system, incorporating storing the encoded output from multiple encoders of Hatabu into files which will be read by multiplexer later for multiplexing, as applied to claim 154, discloses A content distribution apparatus (Fig.1) comprising:

means for reading at least one item of encoded data (encoded packet generator 115-1, 115-2, Fig.2) and at least one item of error correction code data (packer error detecting code 116-1, 116-2, Fig.2) from a content file;

first through Nth encoded data transmission means (multiplexer 602, Fig.6) for receiving the read encoded data and outputting first through Nth encoded data (wherein N is an integer equal to or greater than one); and

at least one error correction code data transmission means for receiving the read error correction code data and outputting the error correction code data (output first encoded packet data and output second encoded packet data, Fig.2; either of them has both

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encoded data and error correction code);

at least one of: a) at least a part of the first through Nth encoded data, respectively; and
(b) at least a part of the error correction code data (output first encoded packet data and output second encoded packet data, Fig.2; either of them has both encoded data and error correction code); being transmitted with time difference (delay adder 601, fig.6) or interleaving.

Regarding **claim 163**, Hatabu teaches everything as applied above (see 154).
Hatabu further teaches wherein in case the N is the integer equal to or greater than two (N is an integer of 2 or greater, par.45), each transmitting unit of the first through Nth encoded data is an encoded data unit (N moving picture encoder, par.47) obtained by encoding information on a same location of a same medium or in a same time period (same time as a reference frame. par. 47).

Regarding **claim 164**, Hatabu teaches everything as applied above (see 163).
Hatabu further teaches means for assigning a same identification number (frame packet identification number 116-1 and 116-2, fig.2) to the same transmitting unit of the first through Nth encoded data, respectively, in case the N is the integer equal to or greater than two.

Regarding **claim 165**, Hatabu teaches everything as applied above (see 164).
Hatabu further teaches means for assigning to the encoded data transmitting unit of at least one of the first through Nth encoded data information allowing identification to which one of the encoded data the encoded data transmitting unit belongs (in order for

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a receiving apparatus to detect transmission error of encoded packet data output by first encoder or second encoder, par. 52 and 55) .

Regarding **claim 166**, Hatabu teaches everything as applied above (see 154). However, Hatabu does not disclose expressly wherein at least one of said first through Nth encoded data transmission means includes means for selecting whether to transmit the at least a part of the data for transmission or not according to at least one of the distribution rate and the state of the transmission path.

However, Hatabu further discloses encoding part of frame at encoders other than primary, in order to reduce data rate generated by plural encoders (par. 34). It was obvious to reduce data rate analogously by selecting part of data generated by encoders other than primary based on distribution rate, in order to match distribution rate.

Therefore, given this teaching, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Hatabu by providing specifically selecting part of data generated by encoders other than primary based on distribution rate, in order to match the distribution rate. The Hatabu moving image transferring system, incorporating storing the encoded output from multiple encoders of Hatabu into files which will be read by multiplexer later for multiplexing, further incorporating selecting part of data generated by encoders other than primary based on distribution rate, has all the features of claim 166.

Regarding **claim 182**, Hatabu teaches everything as applied above (see 154). However, Hatabu does not disclose expressly wherein the means for reconstructing the

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encoded data determines whether the encoded data is duplicated or not based on an identification number assigned to a transmitting unit of the encoded data.

However, Hatabu discloses adding frame/packet identification number to the encoded packet (116-1, 116-2, Fig.2), in order to detect a packet loss. Therefore, it was obvious that the packet identification number can be used to detect the duplicate of packet which has the same packet number as the previously received one, in order to avoid the incorrect reconstruction by combining duplicate packets.

Therefore, given this motivation, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Hatabu by providing specifically determining whether the encoded data is duplicated or not based on an identification number assigned to a transmitting unit of the encoded data, in order to avoid the incorrect reconstruction by combining duplicate packets. The Hatabu moving image transferring system, incorporating storing the encoded output from multiple encoders of Hatabu into files which will be read by multiplexer later for multiplexing, further incorporating determining whether the encoded data is duplicated or not based on an identification number assigned to a transmitting unit of the encoded data, has all the features of claim 182.

Regarding **claim 186**, Hatabu teaches everything as applied above (see claim 154). In addition, Hatabu discloses further comprising: means (multiplexer 602, Fig.6) for multiplexing the data output from at least two of said first through Nth encoded data transmission means, for transmission.

Regarding **claim 187**, Hatabu teaches everything as applied above (see claim 155). In addition, Hatabu discloses further comprising: means (multiplexer 602, Fig.6) for multiplexing the data output from at least two of said first through Nth encoded data transmission means, for transmission.

Regarding **claim 189**, Hatabu and Iwami teach everything as applied above (see claim 158). In addition, Hatabu discloses further comprising: means (multiplexer 602, Fig.6) for multiplexing the data output from at least two of said first through Nth encoded data transmission means, for transmission.

6. **Claims 156, 167 and 177-178** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hatabu in view of Iwami (US 5,528,284).

Regarding **claim 156**, Hatabu teaches everything as applied above (see 154). However, Hatabu does not disclose expressly further comprising:
means for reading at least one item of Intra-frame encoded data from said content file;
and intra-frame encoded data transmission means for transmitting at least one Intra-frame encoded data read; at least a part of the Intra-frame encoded data being transmitted.

However, Hatabu discloses interframe prediction (Fig.2). In the analogous field of endeavor, Iwami discloses Video Communication Method Having Refresh Function of Coding Sequence and Terminal Devices Thereof. Iwami specifically discloses that intra frame is obtained by interframe predictive coding differential information between one video frame to be coded and one preceding frame (col.1, line 23-26).

Therefore, given this teaching, it would have been obvious to one of ordinary skill in the art at the time invention that the encoded content file includes at least one Intra frame. Therefore, reading and transmitting at least one Intra-frame encoded data naturally follows during transmission of encoded content file.

Regarding **claim 167**, Hatabu teaches everything as applied above (see 154). However, Hatabu does not disclose expressly wherein when selecting the part of the data for transmission, at least one of said first through Nth encoded data transmission means includes means for selecting the data according to a property of encoding information or the predetermined rule.

In the analogous field of endeavor, Iwami discloses Video Communication Method Having Refresh Function of Coding Sequence and Terminal Devices Thereof. Iwami specifically discloses selecting the data (sending **intra frame** when receiver does refresh request due to detection of lost packet, Fig.14) according to a property of encoding information (coding type, col.2, line 67), in order to allow a receiver to normalize the output image rapidly in the presence of network abnormality (col.1, line 59-64).

Therefore, given this teaching, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Hatabu by providing specifically selecting and transmitting intra frames after refresh request from receiver due to lost packet, in order to allow a receiver to normalize the output image rapidly in the presence of network abnormality. The Hatabu moving image transferring system, incorporating storing the encoded output from multiple encoders of Hatabu into files

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which will be read by multiplexer later for multiplexing, further incorporating selecting and transmitting intra frames after refresh request from receiver due to lost packet, has all the features of claim 167.

Regarding **claim 177**, Hatabu teaches everything as applied above (see 175). However, Hatabu does not disclose expressly further including:
means for receiving Intra-frame encoded data from at least one session.

However, Hatabu discloses interframe prediction (Fig.2). And Iwami specifically discloses that intra frame is obtained by interframe predictive coding differential information between one video frame to be coded and one preceding frame (col.1, line 23-26).

Therefore, given this teaching, it would have been obvious to one of ordinary skill in the art at the time of invention that the encoded data includes at least one Intra frame encoded data from at least one session.

Regarding **claim 178**, Hatabu and Iwami discloses everything claimed as applied above (see claim 177). Iwami further teaches wherein means for reconstructing the encoded data selects the Intra-frame encoded data by a predetermined device (intra frame is obtained by interframe predictive coding differential information between one video frame to be coded and one preceding frame, col.1, line 23-26).

7. **Claim 162** is rejected under 35 U.S.C. 103(a) as being unpatentable over Hatabu in view of Bhatt (US 6,745,364), hereafter referenced as Bhatt.

Regarding **claim 162**, Hatabu teaches everything as applied above (see 154). However, Hatabu fails to disclose means for notifying at least one of: a type of the encoded data for transmission; a setting of the encoding; a number of the encoded data; a type of error correction encoding; setting of the error correction encoding; a number of the error correction code data; and a number of the Intra-frame encoded data; to said content receiving apparatus, using the call connection processing.

In the analogous field of endeavor, Bhatt discloses Negotiated/Dynamic Error Correction for Streamed Media. Bhatt specifically discloses disclose means for notifying a type of error correction encoding to the content receiving apparatus, using the call connection processing (initially/dynamically negotiate to use a particular type of error correction encoding, col.12, line 36-40), in order to further improve streamed media process (col.12, line 36-40).

Therefore, given this teaching, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Hatabu by providing specifically initially/dynamically negotiating to use a particular type of error correction encoding, in order to transmit the video on the schedule or video on demand. The Hatabu moving image transferring system, incorporating storing the encoded output from multiple encoders of Hatabu into files which will be read by multiplexer later for multiplexing, further incorporating the Bhatt initially/dynamically negotiating to use a particular type of error correction encoding, has all the features of claim 162.

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8. **Claims 168-169 and 179** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hatabu in view of Colligan (US 6,415,031), hereafter referenced as Colligan.

Regarding **claim 168**, Hatabu teaches everything as applied above (see 154). However, Hatabu fails to disclose means for encrypting the at least a part of the data, for transmission.

In the analogous field of endeavor, Colligan discloses Selective and Renewable Encryption for Secure Distribution. Colligan specifically discloses means for encrypting (Vide Encrypted 306, Fig. 3A) the at least a part of the data, for transmission, in order to do secure video distribution (col.1, line 22-24).

Therefore, given this teaching, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Hatabu by providing specifically video encryption, in order to do secure video distribution. The Hatabu moving image transferring system, incorporating storing the encoded output from multiple encoders of Hatabu into files which will be read by multiplexer later for multiplexing, further incorporating the Colligan video encryption, has all the features of claim 168.

Regarding **claim 169**, the Hatabu moving image transferring system, incorporating storing the encoded output from multiple encoders of Hatabu into files which will be read by multiplexer later for multiplexing, further incorporating the Colligan video encryption, as applied to claim 168, teaches means for controlling at least one of: presence or absence of the encryption (SC (scramble Control), Fig.11A); a distribution destination of an encryption key; an encryption scheme; and an intensity of the

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encryption, thereby controlling at least one of quality, stability, and confidentiality of contents to be distributed on a content distribution side.

Regarding **claim 179**, Hatabu teaches everything as applied above (see 175). However, Hatabu fails to disclose means for restoring the encoded data using at least one of: an encryption key obtained by call connection processing when the encoded data is encrypted; a distributed encryption key; and a predetermined encryption key. Colligan specifically discloses means (Video Decrypted 510, Fig. 5A) for restoring the encoded data using a distributed encryption key (key have been received via a communication channel), in order to do secure video distribution (col.1, line 22-24).

Therefore, given this teaching, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Hatabu by providing specifically video encryption, in order to do secure video distribution. The Hatabu moving image transferring system, incorporating storing the encoded output from multiple encoders of Hatabu into files which will be read by multiplexer later for multiplexing, further incorporating the Colligan video encryption and decryption, has all the features of claim 179.

9. **Claims 170 and 171** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hatabu in view of Kazunori (JP2003-318,851), hereafter referenced as Kazunori.

Please notice that in this office action, Machine translation of Kazunori (JP2003-318,851) is used which is attached in this office action.

Regarding **claim 170**, Hatabu teaches everything as applied above (see 154). However, Hatabu does not disclose expressly means for transmitting the data to be output from said first through Nth encoded data transmission means using different sessions, respectively.

In the analogous field of endeavor, Kazunori discloses Code Conversion Transmission Method, Code Conversion Reception Method, Device, System and Program of Audio Data. Kazunori specifically discloses means for transmitting the data to be output from said first through Nth encoded data transmission means (Fig.1) using different sessions (**transmit individually** or multiplexed, par. 60), respectively, In order to transmit N encoded data (par.60).

Therefore, given this teaching, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Hatabu by providing specifically transmitting N encoded data individually or multiplexed together, in order to transmit N encoded data. The Hatabu moving image transferring system, incorporating storing the encoded output from multiple encoders of Hatabu into files which will be read by multiplexer later for multiplexing, further incorporating the Kazunori transmitting N encoded data individually or multiplexed together, has all the features of claim 170.

Regarding **claim 171**, the Hatabu moving image transferring system, incorporating storing the encoded output from multiple encoders of Hatabu into files which will be read by multiplexer later for multiplexing, further incorporating the Kazunori transmitting N encoded data individually or multiplexed together s, as applied to claim 170, discloses at least one means for multiplexing at least two outputs of the

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output data output (Fig.1) from said encoded data transmission means;
the multiplexed data and the data not multiplexed being transmitted using different sessions, respectively (Kazunori: transmit individually or multiplexed; examiner interprets whatever not multiplexed are transmitted individually and therefore it is transmitted in different session than multiplexed encoded data).

10. **Claims 172 and 173** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hatabu in view of Kazunori, further in view of Alao (US 7,017,175), hereafter referenced as Alao.

Regarding **claim 172**, Hatabu and Kazunori discloses everything claimed as applied above (see claim 170). However, Hatabu and Kazunori fails to disclose wherein multicast or broadcast transmission is performed using at least one session for distribution.

In the analogous field of endeavor, Alao discloses Digital Television Application Protocol for Interactive Television. Alao specifically discloses wherein multicast (multicasting, col.5, line 10) or broadcast transmission is performed using at least one session (DATP session, col.14, line 47) for distribution, in order to multicast data to a collection of clients (col.16, line 62-67))

Therefore, given this teaching, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Hatabu and Kazunori by providing specifically Multicasting using DATP sessions, in order to multicast data to a collection of clients. The Hatabu moving image transferring system, incorporating storing the

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encoded output from multiple encoders of Hatabu into files which will be read by multiplexer later for multiplexing, further incorporating the Kazunori transmitting N encoded data individually or multiplexed together, further incorporating the Alao Multicasting using DATP sessions, has all the features of claim 172.

Regarding **claim 173**, the Hatabu moving image transferring system, incorporating storing the encoded output from multiple encoders of Hatabu into files which will be read by multiplexer later for multiplexing, further incorporating the Kazunori transmitting N encoded data individually or multiplexed together, further incorporating the Alao Multicasting using DATP sessions, as applied to claim 172, teaches means for controlling a notification destination of session information (Alao: id of destination) on a session (Alao: session id) for transmitting the data, thereby controlling quality (different qualities from Hatabu: each of N encoded data) and stability (Hatabu: error detecting) of contents to be distributed on a content distribution side.

11. **Claim 174** is rejected under 35 U.S.C. 103(a) as being unpatentable over Hatabu in view of Kazunori, further in view of Kung (US 6,373,817), hereafter referenced as Kung.

Regarding **claim 174**, Hatabu and Kazunori discloses everything claimed as applied above (see claim 170). However, Hatabu and Kazunori fails to disclose means for performing at least one of routing priority control on a transmission path and power control on a wireless transmission path using at least one of sessions for distributing the data.

In the analogous field of endeavor, Kung discloses Chase ME System. Kung specifically discloses means (least cost route server 255, Fig.4) for performing at least one of routing priority control on a transmission path and power control (determining least cost routing, col.29, line 54-56) on a wireless (wireless 144, Fig.1) transmission path using at least one of sessions (communication session, col.17, line 64) for distributing the data, in order to do the least cost routing (col.29, line 54-56).

Therefore, given this teaching, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Hatabu and Kazunori by providing specifically least cost route server, in order to do least cost routing on wireless transmission path. The Hatabu moving image transferring system, incorporating storing the encoded output from multiple encoders of Hatabu into files which will be read by multiplexer later for multiplexing, further incorporating the Kazunori transmitting N encoded data individually or multiplexed together, further incorporating the Kung least cost routing server on wireless transmission path, has all the features of claim 174.

12. **Claim 176** is rejected under 35 U.S.C. 103(a) as being unpatentable over Hatabu in view of Kikuchi (US 6,571,361), hereafter referenced as Kikuchi.

Regarding **claim 176**, Hatabu discloses A content receiving apparatus comprising: means for receiving encoded data (encoded data receiver 201-1 and 201-N, Fig.1) and error correction code data (packet error detecting code 116-1 and 116-2, Fig.2), from at least one session and identifying individual ones of the encoded data and the error correction code data therefrom (Fig.7); and

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means for extracting the encoded data received with no transmission error and no dropout from among the received data (Fig.7). However, Hatabu fails to disclose means for restoring the encoded data using the error correction code data when the transmission error or the dropout is present to reconstruct the encoded data.

In the analogous field of endeavor, Kikuchi discloses Encoder and Decoder. Kikuchi specifically discloses means (Error Correction/Detection Decoder 904, Fig.9) for restoring the encoded data using the error correction code data (FEC 802, Fig.8) when the transmission error (high error rate in a radio transmission, col.1, line 8-10) or the dropout is present to reconstruct the encoded data (enabling error correction, col.1, line 34, in order to correct transmission/storage errors (col.1, line 28-40)

Therefore, given this teaching, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Hatabu by providing specifically error correcting encoding and decoding, in order to correct transmission errors in the packet . The Hatabu moving image transferring system, incorporating storing the encoded output from multiple encoders of Hatabu into files which will be read by multiplexer later for multiplexing, further incorporating the Kikuchi error correcting coding and decoding, has all the features of claim 176.

13. **Claim 181** is rejected under 35 U.S.C. 103(a) as being unpatentable over Hatabu in view of Oshima (US 5,892,879), hereafter referenced as Oshima.

Regarding **claim 181**, Hatabu discloses everything as claimed as applied above (see claim 175). However, Hatabu fails to disclose further including:

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a step of selecting whether to receive at least one of the error correction code data when receiving the at least one of the error correction code data or the error correction code data used in error correction processing, based on at least one of: error/loss rate of received data; error/loss state of data on a transmission path; error correction encoding scheme; available power; and setting set in advance.

In the analogous field of endeavor, Oshima discloses Communication System for Plural Data Streams. Oshima specifically discloses a step of selecting whether to receive at least one of the error correction code data (demodulation of output data of second subchannel is cancelled when an error rate of said receiving signal is higher than a predetermined level, col.71, line 50-55) when receiving the at least one of the error correction code data or the error correction code data used in error correction processing based on error rate of received data, in order to avoid inaccuracy of the reproduction due to the erroneous data beyond critical error level (col.14, line 34-36).

Therefore, given this teaching, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Hatabu by providing specifically cancelling receiving error correcting code data when an error rate of error correcting coded data is higher than a predetermined level, in order to avoid inaccuracy of the reproduction due to the erroneous data beyond critical error level. The Hatabu moving image transferring system, incorporating storing the encoded output from multiple encoders of Hatabu into files which will be read by multiplexer later for multiplexing, further incorporating the Oshima cancelling receiving error correcting code data when

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an error rate of error correcting coded data is higher than a predetermined level, has all the features of claim 181.

14. **Claim 183** is rejected under 35 U.S.C. 103(a) as being unpatentable over Hatabu and MPEG inherency supported by Hylton (US 5,708,961), hereafter referenced as Hylton.

Regarding **claim 183**, Hatabu discloses everything as claimed as applied above (see claim 175). Hatabu discloses that video stream is the standard MPEG compressed stream (par.116). However, Hatabu does not expressly disclose wherein the means for reconstructing the encoded data comprises means for determining at least one of a compression rate and a data type of the encoded data using at least one of:

- (a) a predetermined distribution data receiving session;
- (b) predetermined data identification information assigned to the transmitting unit of the data;
- (c) a distribution data receiving session, notified by the call connection processing; and
- (d) data identification information assigned to the transmitting unit of the data and notified by the call connection processing.

In the analogous field of endeavor, Hylton discloses Wireless On-Demand Video Distribution Using Digital Multiplexing. Hylton specifically discloses the means for reconstructing the encoded data comprises means for determining a data type (video or Audio data) of the encoded data using predetermined data identification information (

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Packet ID, Fig.2; Fig.3 shows video and audio Packet ID) assigned to the transmitting unit of the data.

15. **Claim 184** is rejected under 35 U.S.C. 103(a) as being unpatentable over Hatabu and MPEG inherency supported by Tudor (Electronics & Communication Engineering Journal, December 1995), hereafter referenced as Tudor.

Regarding **claim 184**, Hatabu discloses everything as claimed as applied above (see claim 175). Hatabu discloses that video stream is the standard MPEG compressed stream (par.116). However, Hatabu does not expressly disclose wherein a unit of the encoded data transmitted by interleaving the unit or providing a time difference for the unit can be received, and a buffer size determined by at least one of:

- (a) a predetermined receive buffer size;
- (b) a buffer size notified by the call connection processing;
- (c) a buffer size calculated based on a predetermined content distribution rate and information on a time difference or interleave setting; and
- (d) a buffer size calculated based on a content distribution rate notified by the call connection processing and the information on the time difference or interleave setting; is secured so that the encoded data can be reconstructed.

In the analogous field of endeavor, Tudor discloses MPEG-2 Video Compression. Tudor specifically discloses a buffer size determined by a predetermined receive buffer size (Table on page 14 shows the predetermined Buffer Size for a specific profile and level) .

16. **Claim 185** is rejected under 35 U.S.C. 103(a) as being unpatentable over Hatabu in view of Malmgren (US 6,778,501), hereafter referenced as Malmgren.

Regarding **claim 185**, Hatabu discloses everything as claimed as applied above (see claim 175). However, Hatabu fails to disclose means for transmitting a reception status of distributed data to a content distribution apparatus.

In the analogous field of endeavor, Malmgren discloses Selective Repeat ARQ with Efficient Utilization of Bitmaps. Malmgren specifically discloses means (ARQ feed back mechanism, col.1, line 20-32) for transmitting a reception status of distributed data to a content distribution apparatus (notify the sender that PDU (data unit) was not correctly received, col.1, line 20-32), in order to ensure the reliable delivery (col.1, line 20-32).

Therefore, given this teaching, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Hatabu by providing specifically ARQ feedback mechanism which receiver uses to notify that a particular packet is not correctly received, in order to ensure the reliable delivery. The Hatabu moving image transferring system, incorporating storing the encoded output from multiple encoders of Hatabu into files which will be read by multiplexer later for multiplexing, further incorporating the Malmgren ARQ feedback mechanism which receiver uses to notify that a particular packet is not correctly received, has all the features of claim 185.

Conclusion

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HEE-YONG KIM whose telephone number is (571)270-3669. The examiner can normally be reached on Monday-Thursday, 8:00am-5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Kelley can be reached on 571-272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/HEE-YONG KIM/
Examiner, Art Unit 2482

/Christopher Kelley/
Supervisory Patent Examiner, Art
Unit 2424